MRP Planning Run
LOG-IM-001
November 05, 2008

LaGOV

Version 1.00

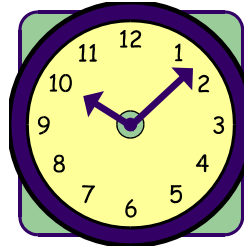Last updated: 11/7/2008 8:56 AM

Agenda

- Logistics, Ground Rules & Introduction
- Workshop Objectives
- Project Overview/Timeline
- Business Process Review
  - SAP terms glossary
  - As Is Process Discussions
  - Process improvement opportunities
  - SAP concepts & functionality
  - Leading practices
  - Enterprise readiness challenges
- Action Items
- Questions

Logistics

Before we get started ...

Ground Rules

- Has everybody signed in?
- Everybody participates – blueprint is not a spectator sport
- Silence means agreement
- Focus is key – please turn off cell phones and close laptops
- Challenge existing processes and mindsets
- Offer suggestions and ideas
- Think Enterprise
- Ask questions at any time
- One person at a time please
- Creativity, cooperation, and compromise

Introduction

- **Roles**
  - **Process Analyst and Functional Consultant (IBM)** – lead and facilitate the discussions and drive design decisions
  - **Documenter (State Employee)** – take detailed notes to support the formal meeting minutes to be sent by the Process Analyst to all participants for review and feedback
  - **Team Members (LaGov)** – provide additional support for process discussions, address key integration touch points
  - **Subject Matter Experts** – advise team members on the detailed business process and participate in the decisions required to design the future state business process

> ***Round the Room Introductions***
> ***Name***
> ***Position***
> ***Agency***

Blueprint Schedule - Tentative

- Please refer to the handout for the upcoming Blueprint Sessions

Blueprint Objectives

1. Review and discuss the current or <u>As-Is Business Processes</u>
2. Define <u>Master Data – Info Record, Source List, Quota Arrangement</u>
3. Define <u>Future</u> or <u>To-Be Business Processes</u>
4. Identify <u>Development Requirements</u>:
   - <u>F</u>orms
   - <u>R</u>eports
   - <u>I</u>nterfaces
   - <u>C</u>onversions
   - <u>E</u>nhancements
   - <u>W</u>orkflow
5. Understand and communicate any <u>Organizational Impact / Enterprise Readiness Challenges</u>
6. Gather system <u>Security Authorizations</u> and State-wide <u>Training Requirements</u>

Today's Workshop Objectives
TOPICS TO BE DISCUSSED

- MRP execution control parameters
- MRP execution
  - Manual ad hoc
  - Automatic mass processing
- MRP evaluation and output processing

- System Demo
  - MRP output evaluation
  - Purchase order cycle
    - Purchase requisition/planned order management
    - Conversion of planned order to purchase requisition - option
    - Purchase requisition release - option
    - Purchase order creation based on requisition
    - Goods receipt for purchase order
    - Invoice receipt for purchase order
  - Stock transport order cycle
    - Stock transport requisition
    - Stock transport order creation based requisition
    - Goods issue for STO
    - Monitor stock in transfer
    - Goods receipt for STO
  - Reservations and issues for consumption

AS-IS Process Flow

DEPARTMENT OF PUBLIC SAFETY
Inventory Replenishment List

Stock Item	Description	Current Price	Min	Max	On Order	Back Order	Order Method	Order UOM
Site ID:	CENTRAL WAREHOUSE (WHSE)							
A0-01-03-007	BINDER, 3-RING, 11 x 8-1/2" X 2" BLACK	$1.50	60	180	0.0	0.0	O	EA
A0-01-05-016	BOXES, FILE, STORAGE, LETTER SIZE	$2.77	850	2550	0.0	0.0	O	EA
A0-01-07-015	CALENDAR, DESK PAD, 2008, 22 X 17	$1.51	100	500	0.0	0.0	O	EA
A0-01-27-029	FOLDER, FILE POCKET, LEGAL SIZE	$0.45	500	1500	0.0	0.0	O	EA
A0-01-30-001	GLUE STICK, 1/4 oz.	$0.33	72	216	0.0	0.0	O	EA
A0-01-43-200	LABLES, DYMO LABELWRITER	$16.34	10	30	0.0	0.0	O	BOX
A0-01-51-001	NUMBERING MACHINE INK PADS, (BLACK)	$1.99	5	60	0.0	0.0	O	EA
A0-01-53-059	PAD, COLUMNAR GREEN 11x16-3/8, 13-COL.	$3.74	0	0	0.0	0.0	O	EA
A0-01-72-001	Scissors 8" nickel	$3.75	75	225	0.0	0.0	O	EA
A0-02-01-008	FLUOR LAMP, 96", F96T12/CW/SS, 15/CASE	$2.95	28	76	0.0	0.0	O	EA
A0-02-01-010	Fluor. Lamp U shape	$2.68	38	114	0.0	0.0	O	EA
A0-02-05-005	Incandescent telebinocular bulb	$0.69	10	30	0.0	0.0	O	EA
A0-03-05-003	Paper 8-1/2"X11"	$25.70	427	2550	0.0	0.0	O	CS
A0-05-07-011	Cleaner, all purpose, (1 gal. jug)	$5.25	100	300	0.0	0.0	O	EA
A0-05-07-020	Cleaner, bowl, non-corrosive (32 oz.)	$1.27	360	1080	0.0	0.0	O	EA
A0-05-15-024	Liners, office can, 15" x 9" x 24"	$8.50	72	216	0.0	0.0	O	CS
A0-05-17-001	Toilet tissue, regular, 96 / case	$0.30	16000	48000	0.0	0.0	O	ROLL
A0-05-23-005	Dishwashing liquid	$0.94	306	918	0.0	0.0	O	EA

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As-Is Reorder Point Planning

Receive report listing items below min/max → Warehouse Manager Determines what is to be reordered → Warehouse Manager creates requisitions for inventory replacement

SAP Glossary

➤ **Regenerative Planning (NEUPL)** – During regenerative planning, all materials are planned for a plant. This makes sense when you are carrying out the planning run for the first time as well as later during production if data consistency cannot be guaranteed due to technical error.

➤ **Net Change Planning (NETCH)** – In net change planning, only those materials are planned for which the net change planning indicator in the planning file has been set as a planning file entry. The system usually sets the indicator automatically as soon as a change is made to the material that is relevant to MRP.

➤ **Net Change Planning in the Planning Horizon (NETPL)** – With this option, the system only plans materials that have undergone a change that is relevant to the planning run within the period which you defined as the planning horizon.

➤ **Planning File -** The planning file contains a list of all materials relevant to the MRP planning run. The following changes cause an entry in the planning file to be made:

  – Material created with an MRP relevant MRP type
  – Changes to stock, if these change the stock/requirements situation of the material
  – Creation of purchase requisitions, purchase orders, planned orders, sales requirements, forecast requirements, dependent requirements or reservations
  – Changing to fields that are relevant to the planning run for these receipts and issues or in the material master
  – Deleting receipt or issue quantities

SAP Glossary

➢ **Exception Messages** – During the planning run, the system recognizes exceptional situations where you usually have to manually reprocess the planning result and it records these situations as exception messages. The system displays the exception messages in the evaluations for MRP.

➢ **Planned Order** – Internal planned output from MRP that can be changed, rescheduled or deleted at any time. It can also be converted into either a production order or a purchase requisition. Planned orders are re-planned by MRP unless they have been fixed.

➢ **Purchase Requisition** – Internal planned output from MRP that can be changed, rescheduled or deleted at any time. It can also be converted into either a purchase order or request for quotation. Purchase requisitions are re-planned by MRP unless they have been fixed.

➢ **Purchase Order** – Firm commitment to an external vendor for procurement of materials or services. Purchase orders are not planned by MRP. If the MRP determines a conflict between demand and supply, exception messages are issued.

➢ **Production Order** – Firm commitment for internal manufacturing or assembly. Production Orders are not planned by MRP. If the MRP determines a conflict between demand and supply, exception messages are issued.
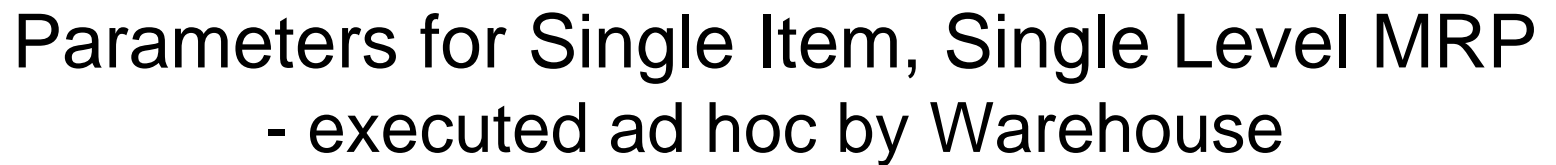
MRP Execution
Control Parameters

MRP Execution Control Parameters

- **Processing Key**
  - ➢ You can choose whether all materials are to be planned or only those with MRP relevant changes.

- **Creation indicator for procurement proposals for materials that are procured externally**
  - ➢ You can choose whether planned orders, purchase requisitions or schedule lines should be created for materials that are procured externally.

- **Creation indicator for MRP lists**
  - ➢ You can define whether MRP lists are to be created.

- **Planning mode**
  - ➢ You can determine how the system is to deal with procurement proposals (planned orders, purchase requisitions, scheduling agreement lines) from the last planning run, which are not yet firmed, in the next planning run.

- **Scheduling**
  - ➢ You can choose basic date calculation or lead time scheduling.

Parameters for Single Item, Single Level MRP - executed ad hoc by Warehouse

Parameters for Total Planning Run
- automatic every night

MRP Execution

Execution of Single Item, Single Level MRP - executed ad hoc by Warehouse

Can be set as default values

Defining Total Planning Run

Variant Edit Goto System Help

Maintain Variant: Report RMMRP000, Variant DOTD TEST

Variant Attributes

Scope of planning   DOTD
Plant

MRP control parameters

Processing key	NETCH
Create purchase req.	2
Schedule lines	3
Create MRP list	1
Planning mode	3
Scheduling	1
Planning date	10/24/2008

Process control parameters

☐ Display material list
☑ Parallel processing

User exit: selecting materials for planning

User exit key
User exit parameters

Schedule Automatic Total Planning Run

MRP Evaluation
and Output Processing

MRP List

- **Definition of the MRP List**

  - ➢ The system creates MRP lists during the planning run according to how you set the creation indicator. These lists contain the planning result for the material. The MRP list always displays the stock/requirements situation at the time of the last planning run and it also provides a work basis for the MRP controller. Changes that are made after the planning date are not taken into consideration, so the list is static.

  - ➢ MRP lists are stored in the system until they are either deleted manually or replaced by new lists from a subsequent planning run.

Stock Requirements List

- **Stock/Requirements List**

  - ➤ In the stock/requirements list, the most up-to-date stock and requirements situation is displayed.

  - ➤ The main difference between the MRP list and the stock/requirements list is that each time the stock/requirements list is called up, the system selects the various MRP elements and displays the most up-to-date situation. You thus always see the current availability situation of the material in the stock/requirements list. Changes that are made after the planning date are displayed directly, so the list is therefore dynamic.

  - ➤ Stock/requirements lists are not saved in a fixed state in the system, but are subject to change and only exist in the working memory.

Exception Messages in
MRP List and Stock Requirements List

SelGr	Exc.	Exception Message
0	69	Recursive BOM components possible
1	02	New, and opening date in the past
1	05	Opening date in the past
2	03	New, and start date in the past
2	06	Start date in the past
2	63	Production start before order start
3	04	New, and finish date in the past
3	07	Finish date in the past
3	64	Production finish after order finish
4	01	Newly created order proposal
4	42	Order proposal has been changed
4	44	Order proposal re-exploded
4	46	Order proposal has been manually changed
4	61	Scheduling: Customizing inconsistent
4	62	Scheduling: Master data inconsistent
4	80	Reference to retail promotion
4	82	Item is blocked

SelGr	Exc.	Exception Message
5	50	No BOM exists
5	52	No BOM selected
5	53	No BOM explosion due to missing config.
5	54	No valid run schedule header
5	55	Phantom assembly not exploded
6	25	Excess stock
6	26	Excess in individual segment
6	40	Coverage not provided by master plan
6	56	Shortage in the planning time fence
6	57	Disc. matl partly replaced by follow-up
6	58	Uncovered reqmt after effective-out date
6	59	Receipt after effective-out date
6	70	Max. release qty - quota exceeded
6	96	Stock fallen below safety stock level
7	10	Reschedule in
7	15	Reschedule out
7	20	Cancel process
7	30	Plan process according to schedule
8	98	Abnormal end of materials planning

MRP List: Materials List

Individual MRP List

MRP List   Edit   Goto   Settings   Environment   System   Help

MRP List as of 10/24/2008, 16:02 hrs

Show Overview Tree | On

Material	000000000000000003	Boot, Knee, Rubber, Size 6, 16" Top
MRP area	DD01	DOTD Central Warehouse
Plant	DD01	MRP type VB Material Type HALB Unit PAA

Each purchase requisition can be accessed from here and modified as needed.

A...	Date	MRP ...	MRP element data	Rescheduli...	E...	Receipt/Reqmt	Available Qty	Su...	Sto...
	10/24/2008	Stock			96		1		
	10/24/2008	SafeSt	Safety Stock			20-	19-		
	10/24/2008	PRqRel	0010000004/00010			16-	35-	D003	1000
	10/24/2008	PRqRel	0010000005/00010			4-	39-	D003	0001
	10/31/2008	PurRqs	0010000018/00010		01	99	60		

Individual exception message

Stock/Requirements List: Material List

Individual Stock/Requirements List

Stock/Requirements List as of 16:53 hrs

Show Overview Tree

Material: 000000000000000003 Boot, Knee, Rubber, Size 6, 16" Top
MRP area: DD01 DOTD Central Warehouse
Plant: DD01 MRP type: VB Material Type: HALB Unit: PAA

A...	Date	MRP ...	MRP element data	Rescheduli...	E...	Receipt/Reqmt	Available Qty	Su...	Sto...
	10/24/2008	Stock					21		
	10/24/2008	SafeSt	Safety Stock			20-	1		
	10/24/2008	PRqRel	0010000004/00010			16-	15-	D003	1000
	10/24/2008	PRqRel	0010000005/00010			4-	19-	D003	0001
	10/31/2008	PurRqs	0010000018/00010			99	80		

Notice stock quantity is different than in MRP List

Stock Overview

List Edit Goto Extras Environment System Help

Stock Overview: Basic List

Selection

Material	000000000000000003	oot, Knee, Rubber, Size 6, 16" Top	
Material Type	HALB	Semifinished products	
Unit of Measure	PAA	Base Unit of Measure	PAA

Stock Overview

Detailed Display

Client/Company Code/Plant/Storage Location/Batch/Special Stock	Unrestricted use	Qual. inspection	Reserved	Rcpt reservation	On-Orde...
▽ 🔷 Full	25.000				
▽ DOA1 LaGov	25.000				
▽ D003 Lafayette	4.000				
1000 SR Dis 03 01-03-07	4.000				
▽ DD01 DOTD Central Warehouse	21.000				
0001 Central Whs 06-32-02	21.000				

List Display of Purchase Requisitions - Selection Criteria

Program   Edit   Goto   System   Help

List Display of Purchase Requisitions

Field	Value		to	Value	
Purchase requisition			to		→
Purchasing group			to		→
Material			to		→
Material group			to		→
Requirement tracking number			to		→
Scope of List	A				
Plant	DD01		to		→
Document Type			to		→
Item Category			to		→
Account Assignment Category			to		→
Delivery Date			to		→
Release Date			to		→
Materials Planner/Controller			to		→
Processing Status			to		→
Fixed Vendor			to		→
PReq. processing state			to		→
Blocking indicator			to		→
Requisitioner					
Short Text					
Sort Indicator	1				

☑ Assigned Purchase Requisitions
☐ Closed Requisitions
☑ "Partly Ordered" Requisitions
☐ Released Requisitions Only
☑ Requisns for Overall Release
☑ Requisns for Item-Wise Release

Field	Value		to	Value	
Cost Center			to		→
WBS Element			to		→
Order			to		→
Asset			to		→
Asset Subnumber			to		→
Network			to		→
Operation Number			to		→
Sales Order			to		→

List Display of Purchase Requisitions
- Output

Each purchase requisition can be accessed from here and modified as needed.

Releasing Procurement Proposals
to Purchasing - Option 1

- **Purchase Requisitions as MRP output that the Warehouse releases for processing in Procurement**

  ➢ The system creates purchase requisitions. Once the MRP controller is satisfied with the results of planning, the purchase requisitions are released and passed on to the purchasing department.

  ➢ This option makes the order proposals that the Warehouse has released to purchasing less visible in the MRP List and Stock Requirements List because the individual requisition has to be opened to determine if it has been released.

  ➢ A purchase requisition cannot be released from the MRP List or Stock/Requirements List. It requires an additional transaction to release the requisition to purchasing.

Releasing Procurement Proposals
to Purchasing - Option 2

- **Planned Orders as MRP output that the Warehouse converts into Purchase Requisitions for processing in Procurement**

    - ➢ The system creates planned orders. Once the MRP controller is satisfied with the results of planning, the planned orders are converted into purchase requisitions and passed on to the purchasing department.

    - ➢ This option makes the order proposals that the Warehouse has released to purchasing very visible in the MRP List and Stock Requirements List.

    - ➢ Planned orders can be converted to requisitions directly in the MRP List or Stock/Requirements List and does not require an additional transaction.

Conversion of Planned Order into Purchase Requisition

By converting the planned order into a purchase requisition, the Warehouse releases the order proposal to Purchasing

Requisition Release
from Warehouse to Purchasing

A Release strategy can be applied so MRP generated requisitions cannot be converted into Purchase Orders until they are released by the Warehouse.

System Demo

Questions?